



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

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July 20, 2010

Instruction Memorandum No. UT 2010-055

Expires 09/30/11

To: All District and Field Offices

From: State Director

Subject: Protection of Ground Water Associated with Oil and Gas Leasing, Exploration and Development – Utah BLM

Program Areas: Fluid Minerals and NEPA

Purpose: The purpose of this Instruction Memorandum (IM) is to enhance the existing process for the continued protection of all usable ground water zones ($\leq 10,000$ mg/L as defined in Onshore Oil and Gas Order No. 2) associated with oil and gas exploration and development. Sole Source Aquifers (SSAs) and Drinking Water Source Protection Zones (DWSPZs) are designated drinking water aquifers requiring additional analysis. Utilization of the documentation outlined in this IM will bring consistency to field office review and aid Utah BLM in responding to inquiries regarding BLM's analysis of usable ground water and drinking water protection measures during the NEPA process and subsequent operations. This IM is in support of Onshore Oil and Gas Order No. 1 drilling plan requirements outlined in Section III, D., 3. and surface use plan of operation requirements in Sec. III, D., 4.

Policy/Action: At the time of exploration and/or development, operators/lessees must adhere to the BLM's rules and regulations outlined in 43 CFR §3160, the operational requirements in Onshore Oil and Gas Orders Nos. 1, 2 and 7, and the guidance in the Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development - The Gold Book.

The attachments to this IM provide resource protection guidance, along with a process for the implementation of analysis and the development of mitigation measures necessary for usable ground water protection. The documentation generated during the review process for each notice of staking (NOS) or application for permit to drill (APD) is critical in formulating a consistent and defensible analysis of the potential to impact usable ground water, including SSAs and

DWSPZs. Where potential impact is anticipated, mitigation measures must be developed. The review documentation must be placed in the well file administrative record.

At the time of NOS or APD submittal, the field office interdisciplinary review team will determine if the proposed well location has the potential to impact private wells and usable ground water zones, including SSAs as designated by the Environmental Protection Agency (EPA) (Attachments K and L) or the Utah Division of Drinking Water (DDW) designated DWSPZs for ground water. It may be necessary to attach additional protective mitigation measures or requirements to the APD through conditions of approval (COAs). A state-wide GIS directory, containing updated GIS layer files and the Utah DDW DWSPZ files can be used to assist in performing NOS or APD spatial analysis and is located at:

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Attachments A through J provide information, guidance and documentation forms for completing the process of locating and evaluating potential usable ground water zones and ensuring their protection. Attachments A and B provide guidance on ground water protection regulations and the analysis and documentation processes field offices must follow. The Geologic and Hydrologic APD Review Worksheet (Attachment C) must be used for review of the operator's drilling plan and geologic/hydrologic reports. The APD Engineering Evaluation Worksheet (Attachment D) must be used by the petroleum engineer (PE) for reviewing casing/cement design adequacy, public health and safety, and proper drilling and completion procedures. The link to the electronic version of these attachments is:

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Timeframes: Upon issuance of this IM, field offices must use the guidance outlined in this IM and attachments for National Environmental Policy Act (NEPA) document preparation, NOS and APD review, as well as, during drilling, completion, inspection, enforcement and monitoring activities.

Background: EPA Region 8 has expressed concern to Utah BLM regarding oil and gas leasing in areas with SSAs, specifically the Glen Canyon and Castle Valley Aquifer Systems near Moab. A lease notice has been developed for any future leases issued for lands overlying SSAs and is included as Attachment E of this IM. BLM has prepared a SSA Condition of Approval (COA) to be attached to any APD submitted for lands within a SSA (Attachment J). Currently, there are no existing oil and gas leases overlying SSAs in Utah, and the majority of lands have been designated as not available for leasing or no surface occupancy (NSO) in the Moab Field Office Resource Management Plan (RMP) and Record of Decision (ROD), approved October, 2008.

The Utah Department of Environmental Quality (UDEQ) DDW expressed the desire for cooperation with BLM to formalize a process to protect DWSPZs in Utah that may potentially be impacted from oil and gas exploration or development. The cooperative effort between DDW and BLM resulted in the Drinking Water Source Protection Lease Notice included in this IM as Attachment F. The DDW provided ArcMap shape files detailing public ground water system and transient water source locations, which were subsequently used for analysis. As a result, the Drinking Water Source Protection Lease Notice is now attached to any lease that overlies a DWSPZ prior to the lease being offered for sale.

As of October, 2009, there were 242 existing authorized leases overlying at least a portion of a DWSPZ. The lessees listed in Attachment I were notified by letter from the Utah State Office in October of 2009. The Utah DWSPZ Condition of Approval (COA) for APDs on Authorized Leases overlying a DWSPZ (Attachment G) accompanied the notification letter. This COA must be attached to all APDs overlying a DWSPZ before the APD can be approved.

On August 4, 2009, the Utah BLM State Office met with the EPA, the Utah State Institutional and Trust Lands Administration (SITLA), the UDEQ and the Utah Division of Oil, Gas and Mining (UDOGM) to discuss the current status of ground water protection during oil and gas exploration and development, as well as, possible data gaps and future needs. To better detail how usable ground water is and will be protected, Attachment H provides language to be included in oil and gas operational NEPA documents. The language may be used in the alternatives, affected environment and/or environmental impacts sections of the document or attached as an appendix and referenced in the document. This template language provides a broader description of BLM's authorities, regulations and processes involving the protection of ground water than had been included in many previous oil and gas NEPA documents. This language may be modified as necessary to address new or site-specific/project information. The ground water protection process contained in this IM will ensure better documentation for Utah BLM and our partner agencies.

Budget Impact: None

Manual/Handbook Sections Affected: None

Coordination: This IM has been coordinated with the districts, field offices and UT93500.

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Signed by:
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Attachments:

- Attachment A - Ground Water Protection Regulations and Guidance
- Attachment B - Ground Water Protection Analysis and Documentation Process
- Attachment C - Geologic and Hydrologic APD Review Worksheet
- Attachment D - APD Engineering Evaluation Worksheet
- Attachment E – Utah BLM SSA Lease Notice
- Attachment F – Utah BLM DWSPZ Lease Notice
- Attachment G - Utah BLM DWSPZ Condition of Approval (COA)
- Attachment H - Utah BLM Ground Water Protection Template Language for Oil and Gas NEPA Documents
- Attachment I – Oil and Gas Leases Overlying a DWSPZ by District/Field Office
- Attachment J – Utah BLM SSA Condition of Approval (COA)
- Attachment K – Map of Castle Valley and Glen Canyon SSAs
- Attachment L – Map of Oakley SSA

cc: UT 920000
UT 930000